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Indian Standard

SPECIFICATION FOR BUCKETS TO BE USED IN POWER DRIVEN BUCKET TYPE SEWER CLEANING MACHINE

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SPECIFICATION FOR BUCKETS TO BE USED IN POWER DRIVEN BUCKET TYPE SEWER CLEANING MACHINE

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SPECIFICATION FOR BUCKETS TO BE USED IN POWER DRIVEN BUCKET TYPE SEWER CLEANING MACHINE

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 May 1983, after the draft finalized by the Public Health Engineering Equipment Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 For removing accumulated silt and debris from a sewer, power driven bucket type sewer cleaning machine should be preferred to old methods, such as manual cleaning by rope pulling which are not considered to be hygienically safe. This standard has been prepared with a view to providing guidance regarding dimension, shape and material of buckets commonly employed in power driven bucket type sewer cleaning machine. General requirements for power driven bucket type sewer cleaning machine have been covered in Indian Standard 'Requirements for power driven type sewer cleaning machine' (*under preparation*).

0.3 In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down requirements regarding materials, capacity nd construction of different sizes of buckets used for cleaning of sewer by ameans of the power driven bucket type machines.

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*Rules for rounding off numerical values (*revised*).

2. MATERIALS

2.1 Buckets shall be made of mild steel plate conforming to IS : 2062-1980*, hot rolled steel sheet/plate conforming to IS : 1079-1973† (Grade 'O', 'D', 'DD' or 'EDD' quality) or cold rolled steel sheet/plate conforming to IS : 513-1973‡ (Grade 'D', 'DD' or 'EDD' quality). Materials for round bars shall conform to IS : 432 (Part 1)-1966§.

2.2 Hooking hole or other attachments may be provided on the bucket for facilitating discharge. Additional steel plates on either side should be welded around the hooking hole.

2.3 The thickness of steel sheets/plates used for fabrication of buckets shall not be less than 3 mm.

3. SIZE AND CAPACITY

3.1 The sizes and capacity of buckets shall be in accordance with Table 1.

TABLE 1 DIMENSION OF BUCKETS

SL No.	DESIGNATION	OVERALL DIA (mm)	OVERALL LENGTH (mm)
i)	B1	100	600
ii)	B2	150	700
iii)	B3	250	900
iv)	B4	300	1 000

4. CONSTRUCTION

4.1 Each bucket shall be designed with construction features like ribs, stiffening flats, etc, to withstand stress and strain arising during operation in the sewer.

4.2 The bucket shall be of cylindro-conical shape.

4.3 The bucket shall be provided with hinged flap bottoms. The hinged flap bottom shall automatically open when being pulled into the sewers. On being pulled out in reverse direction, the flaps shall automatically close. Each bucket shall be provided with bails for connecting to the pulling ropes.

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*Specification for structural steel (fusion welding quality) (*second revision*).

†Specification for hot rolled carbon steel sheet and strip (*third revision*).

‡Specification for cold rolled carbon steel, sheets (*second revision*).

§Specification for mild steel and medium tensile steel bars and hard-drawn steel wire for concrete reinforcement: Part 1 Mild steel and medium tensile steel bars (*second revision*).

4.4 Cutting lips, drain holes and other features may be provided depending upon manufacturer's design.

4.5 The buckets should be so designed that they can be satisfactorily emptied with the help of the rotating hook arms or with the help of truck loader attachments provided on the machine.

5. MARKING

5.1 Each bucket shall have a plate firmly attached, with the following particulars:

a) Manufacturers' name and trade-mark,

b) Designation, and

c) Year of manufacture.

5.1.1 Each bucket may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (*Certification Marks*) *Act* and the *Rules* and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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